Amendments to the Specification:

Please replace the paragraph at page 3, lines 10-11 of the originally-filed specification with the following paragraph.

Figure 2 is a signal diagram depicting an example sent or known signal transmitted over an optical link and a corresponding example received or degraded known signal associated with the optical link;

Please add the following new paragraph to the end of the Brief Description of the Drawings section of the originally-filed specification (page 3, line 16).

Figure 5 is a schematic block diagram showing an exemplary implementation of the methodology for determining the quality of an optical link of Figure 4 using the correlator of Figure 1.

Please add the following new paragraph after the heading Detailed Description of the originally-filed specification (page 3, line 17). The new paragraph contains information from page 1 of U.S. Provisional Patent Application Serial No. 60/430,207 which was incorporated in its entirety by reference, for example, at page 1, lines 11-16, of the originally-filed application. Accordingly, the new paragraph contains no new matter.

Optical correlators fall into two main categories, spatial correlators and temporal correlators. Figure 1 shows a typical correlator (also called a matched filter, adaptive filter, or transversal filter). It consists of three elements: a tapped delay line, a series of weights s_k, and a summer. Each tap produces a replica of the input signal with a delay that it is some integer multiple of the basic delay increment τ. The weighting elements are a series of phase shifters or amplitude changing elements (or a combination). The summing device is labeled Σ. Each of these time-shifted replicas from the tapped delay line is multiplied by a weight, which may be either a phase (complex) weight, or amplitude weight, or a

combination. In optical correlation, a processor is said to be coherent if the weights are complex and interference is used to combine the signals, and incoherent if the weights are amplitude-only. The time-shifted and weighted signals are summed, and this combination of processes produces a correlation- the input signal is correlated with an arbitrary function that is implemented in the series of weights chosen. The resulting signal is a measure of how similar the incoming signal is to the reference signal encoded in the weights.

Please replace the paragraph at page 4, lines 8-17 of the originally-filed specification with the following paragraph.

Referring now to Figures 1 and 5, there is illustrated an example correlator 100 which may be used by the present invention. Of course, an alternate correlator such as the optical correlator described in U.S. Provisional Application serial number 60/430,207, for example, may also be used by the present invention. The received signal 105 is sent to a tapped delay line 110. At each tap, a small amount of the power is siphoned off. There is a time delay τ between each tap. Each of the signal replicas, which should all be of substantially the same amplitude, is then given a weight s_k. The weights 120 can be real, implemented with amplitude weights, or complex, using phase shifters, possibly in combination with amplitude weights. For digital signal monitoring for quality of service, the s_k's will be either 1's or 0's.